Data Validation SOP

HW-23B, Rev. 1.0

Pesticides/PCBs

Note: The most current SOP for validating PCB data is HW-23B. However, until a Regional Data Validation SOP can be prepared for Pesticides (i.e., utilizing analytical method SW-846 8081a), Data Validation SOP HW-23 should be used in conjunction with the QA/QC criteria detailed in SW-846 method 8081a.

YES NO N/A

PACKAGE COMPLETENESS AND DELIVERABLES

CASE NUMBER:_____ SDG# _____

LAB:_____ SITE:_____

1.0 Data Completeness and Deliverables

1.1 Has all the data been submitted in CLP deliverable format? [ ] ___ ___

1.2 Have any missing deliverables been received and added to the data package? [ ] ___ ___

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the data in the reviewer narrative.

2.0 Cover Letter, SDG Narrative

2.1 Is a laboratory narrative or cover letter present? [ ] ___ ___

2.2 Are the case number and/or SDG number contained in the narrative or cover letter? [ ] ___ ___

3.0 Data Validation Checklist

3.1 Does this data package contain:

Water data? ___ ___

Waste data? ___ ___

Soil/solid data? ___ ___

YES NO N/A

POLYCHLORINATED BIPHENYLS

1.0 Traffic Reports and Laboratory Narrative

1.1 Are traffic report and chain-of-custody forms present for all samples? [ ] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the traffic reports, chain-of-custody forms or SDG narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? ___ [ ] ___

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be qualified as estimated, "J." If a soil sample, other than TCLP, contains more than 90% water, non detects shall be qualified as unusable, "R."

ACTION: If samples were not iced or if the ice was melted upon arrival at the laboratory and the temperature of the cooler was elevated (> 10° C), flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any PCB technical holding times, determined from date of collection to date of extraction, been exceeded? ___ [ ] ___

Water and waste samples for PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date of extraction. Soils and solid samples must be extracted within 14 days of collection and analyzed within 40 days of extraction.

ACTION: If technical holding times are exceeded, flag all positive results as estimated, "J," and sample quantitation limits "UJ" and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use

	YES	NO	N/A

professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable,"R."

3.0 Surrogate Recovery (Form II)

3.1 Were the recoveries of tetrachloro-m-xylene (TCMX) and decachlorobiphenyl (DCB) presented on CLP Surrogate Recovery Summary forms (Form II), or equivalent, for each of the following matrices?

a.	Water/Waste	[ ]	___	___
b.	Soil/Solid	[ ]	___	___

3.2 Are all the PCB samples listed on the appropriate surrogate recovery form for each of the following matrices?

a.	Water	[ ]	___	___
b.	Waste	[ ]	___	___
c.	Soil/Solid	[ ]	___	___

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in the data assessment.

3.3 Did the laboratory provide their developed in-house Surrogate recoveries? [ ] ___ ___

ACTION: If no, use 70 -130% recovery to qualify in section 3.4 below.

3.4 Were surrogate recoveries of TCMX or DCB outside of the laboratory-established upper (UCL) or lower (LCL) control limits for any sample or blank? ___ [ ] ___

ACTION: Circle all outliers in red.

ACTION: No qualification is done if surrogates are diluted out. If recovery for both surrogates is

YES NO N/A

below the LCL, but above 10%, flag all results for that sample "J". If recovery is < 10% for either surrogate, qualify positive results "J" and flag non-detects "R". If recovery is above the UCL for both surrogates qualify positive values "J".

Note: DCB is used when PCBs are determined as Aroclors. DCB is the internal standard when determining PCB congeners and TCMX the surrogate.

3.5 Were surrogate retention times (RT) within the windows established during the initial 5-point analysis? [ ] _____

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement. However, flag positive hits as estimate (J) if confirmed by GC/MS analysis.

3.6 Are there any transcription/calculation errors between raw data and Form II? ___ [ ] ___

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document the effect in data assessments.

4.0 Laboratory Control Sample

4.1 Are raw data and percent recoveries present for all Laboratory Control samples as required by Method 8000B (section 8.5) and Method 8082 (section 8.4.2)? [ ] ___ ___

Verify that QC check samples were extracted and analyzed by the same procedures used for the actual samples.

ACTION: If any Laboratory Control Sample data are missing, call the lab for explanation /resubmittals. Make note in the data assessment.

NOTE: For aqueous samples, an additional QC check sample must be prepared and analyzed when any analyte in a matrix spike fails the required acceptance criteria (see section 5.3 below). The additional QC check sample must contain each analyte that failed in the MS analysis.

YES NO N/A

Note: When the results for matrix spike analysis indicates a problem due to sample matrix effects, the LCS results are used to verify the laboratory can perform the analysis in a clean sample.

4.2 Were Laboratory Control Samples analyzed at the required concentration for all analytes of interest as specified in Method 8000B (sec.8.5)? [ ] ___ ___

ACTION: If Laboratory Control Samples were not analyzed at the required concentration or the required frequency, make note in the data assessment and use professional judgement to determined the affect on the data.

4.3 Were the LCS recoveries within the laboratory's in-house per cent recoveries (if not available, use 70 - 130%) [ ] ___ ___

4.4 If no, were Laboratory Control Samples re-analyzed? [ ] ___ ___

Note: Corrective action must be taken when one or more of the analytes of interest fail the QC acceptance criteria (Method 8000B, section 8.7.4)

ACTION: If QC check samples were not re-analyzed, or a general system problem is indicated by repeated failure to meet the QC acceptance criteria specified in the method, make note in the data assessment and use professional judgement to determine the effect on the data.

5.0 Matrix Spikes (Form III)

5.1 Are all data for one matrix spike and matrix duplicate (unspiked) pair (MS/Dup) or matrix spike/matric spike duplicate (MS/MSD)present and complete for each matrix Method 8082(section 8.4.1)? [ ] ___ ___

NOTE: For soil and waste samples showing detectable amounts of organics, the lab may substitute replicate samples in place of the matrix spike (see Method 8000B-40, section 8.5.3)).

5.2 Have MS/Dup or MS/MSD results been summarized on modified CLP Form III? [ ] ___ ___

ACTION: If any data are missing take action as specified in section 3.2 above.

5.3 Were matrix spikes analyzed at the required frequency

	YES	NO	N/A

for each of the following matrices? (One MS/Dup, MS/MSD must be performed for every 20 samples of similar matrix or concentration level. Laboratories analyzing one to ten samples per month are required to analyze at least one MS per month (Method 8000B-39 (section 8.5)).

a. Water | | | | |

b. Waste | | | | |

c. Soil/Solid | | | | |

ACTION: If any MS/Dup or MS/MSD data are missing, take the action specified in 3.2 above.

5.4 Were the 70 - 130% recoveries used to compare the matrix spike recoveries, or did the lab use the optional QC acceptance criteria discussed in Method 8000B-40(section 8.5.3.1)?

List the criteria used and make note in data assessment.

Criteria used _____

5.5 Was the matrix spike prepared at the proper spike concentration? (Method 8000B, section 8.5.1-8.5.2) | | | | |

For aqueous organic extractable, the spike concentration should be prepared according options in: Method 8000B-40, (section 8.5.1 and 8.5.2).

ACTION: No action is taken based on MS or replicate data alone. However, using informed professional judgement, the data reviewer may use the matrix spike or laboratory replicate results in conjunction with other QC criteria and determine the need for some qualification of the data. In some instances it may be determined that only the replicate or spiked samples are affected. Alternatively, the data may suggest that the laboratory is having a systematic problem with one or more analytes, thereby affecting all associated samples.

6.0 Blanks (Form IV)

	YES	NO	N/A
6.1 Was reagent blank data reported on CLP equivalent Method Blank Summary form(s) (Form IV)?	[ ]	___	___
6.2 Frequency of Analysis: Has a reagent blank been analyzed for every 20 (or less) samples of similar matrix or concentration or each extraction batch?	[ ]	___	___

ACTION: If any blank data are missing, take action as specified above (section 3.2) . If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

6.3 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable for PCBs?	[ ]	___	___

ACTION: Use professional judgement to determine the effect on the data.

7.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

7.1 Do any method/instrument/reagent/cleanup blanks have positive results for PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary.	___	[ ]	___
7.2 Do any field/rinse blanks have positive PCB results?	___	[ ]	___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data.

YES NO N/A

Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

ACTION: Follow the directions in the table below to qualify sample results due to contamination. Use the largest value from all the associated blanks.

Sample conc > EDL but < 5 x blank	Sample conc < EDL & is < 5 x blank value	Sample conc > EDL & > 5 x blank value
Flag sample result with a "U"	Report EDL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

7.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ___ ___

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

8.0 GC Apparatus and Materials

8.1 Was the proper gas chromatographic capillary column used for the analysis of PCBs?

Action: Check raw data, instrument logs, or contact the lab to determine what type of columns were used. (Method 8082, section 4.2) [ ] ___ ___

8.2 Indicate the specific type of narrow bore or wide bore (.53 mm ID, fused silica GC columns, such as DB-608 and DB-1701 or equivalent).

column 1: _____

column 2: _____

ACTION: Note any changes to the suggested materials in section 8.1 above in the data assessment. Also note the impact (positive or negative) such changes have on the analytical results.

	YES	NO	N/A

9.0 Calibration and GC Performance

9.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS, replicates?

a.	Samples	[ ]	___	___
b.	All blanks	[ ]	___	___
c.	Matrix spike samples	[ ]	___	___
d.	5 pt. initial calibration standards	[ ]	___	___
e.	calibration verification standards	[ ]	___	___
f.	Laboratory Control samples (LCS)	[ ]	___	___

ACTION: If no, take action specified in 3.2 above.

9.2 Are data summary forms (containing calibration factors or response factors) for the initial 5 pt. calibration and daily calibration verification standards present and complete for each column and each analytical sequence? [ ] ___ ___

Note: Calibration Aroclor mixtures other than 1016/1260 may be used (as per approved project QA plan)

NOTE: If internal standard calibration procedure is used (Method 8000B-15(section 7.4.2.2)), then response factors must be used for %RSD calculations and compound quantitation. If, external standard calibration procedures are used (Method 8000B-16 (section 7.4.2.1)), then calibration factors must be used. The internal standard approach is highly recommended for PCB congener analysis.

ACTION: If any data are missing or it cannot be determined how the laboratory calculated calibration factors or response factors, contact the lab for explanation/resubmittals. Make necessary corrections and note any problems in the data assessment.

9.3 Are there any transcription/calculation errors between raw data and data summary forms? ___ [ ] ___

ACTION: If large errors exist, call lab for

YES NO N/A

explanation/resubmittal, make necessary corrections and document the effect in data assessments.

9.4 Are standard retention time (RT) windows for each PCB peak of interest presented on modified CLP summary forms? [ ] ___ ___

ACTION: If any data are missing, or it cannot be determined how RT windows were calculated, call the lab for explanation/resubmittals. Note any problems in the data assessment.

NOTE: Retention time windows for all PCBs are established using retention times from three calibration standards analyzed during the entire analytical sequence (Method 8000B, section 7.6).

Best results are obtained using retention times which span the entire sequence; i.e., using the calibration verification/continuing calibration standards analyzed every 12 hours.

9.5 Were RT windows on the confirmation column established using three standards as described above? [ ] ___ ___

NOTE: RT windows for the confirmation column should be established using a 3 pt. calibration, preferably spanning the entire analytical sequence as described in 9.4 above. If RT windows on one column are tighter than the other, this may result in false negatives when attempting to identify compounds in the samples.

ACTION: Note potential problems, if any, in the data assessment.

9.6 Do all standard retention times in each level of the initial 5 pt. calibrations for PCBs fall within the windows established during the initial calibration sequence? [ ] ___ ___

ACTION i: If no, all samples in the entire analytical sequence are potentially affected. Check to see if three standard spanning the entire sequence were used to obtained RT windows. If the lab used three standards from the 5 pt., RT windows may be too tight. If so, RT windows should be recalculated as per Method 8081B-15 (section 7.4.6).

ii. Alternatively, check to see if the chromatograms contain peaks

YES NO N/A

within an expanded window surrounding the expected retention times.

If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present but cannot be discerned through pattern recognition or by using revised RT windows, qualify all positive results and non-detects as unusable, "R".

9.7 Has the linearity criteria for the initial calibration standards been satisfied for both columns? (% RSD must be < 20.0% for all analytes). [ ] ___ ___

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD > 90%, flag all non-detect results for that analyte "R" (unusable).

9.8 Does the calibration verification/continuing Calibration standard contain the PCB peaks of interest, analyzed on each working day, prior to sample analyses (Method 8082, sections 7.6.2)? [ ] ___ ___

9.9 Has a calibration verification/continuing calibration standard been analyzed after every 10 samples and at the end of each analytical sequence (Method 8082, section 7.6.2) [ ] ___ ___

ACTION: If no, take action as specified in section 3.2 above.

9.10 Has the percent difference (%D) exceeded ± 15% for any PCB analyte in any calibration verification/ Continuing calibration standard? [ ] ___ ___

9.11 Has a new 5 pt. initial calibration curve been generated for those PCB analytes which failed in the calibration verification/continuing calibration standard (8000B, section 7.7.3), and all samples which followed the out-of-control calibration verification/standard continuing calibration Standard? [ ] ___ ___

ACTION: If the %D for any analyte exceeded the ± 15% criterion and the instrument was not recalibrated for those analytes, qualify positive results for all associated samples (those which followed the out-of-control standard) "J" and sample quantitation limits "UJ". If the %D was > 90%

	YES	NO	N/A
for any analyte, qualify non-detects "R", unusable.			
9.12 Have retention time (RT) windows been properly calculated for each analyte of interest (Method 8000B, section 7.6), using RTs from the associated calibration verification/continuing standard?	[ ]	___	___

ACTION: If no, take action specified in section 3.2 above

9.13 Do all standard retention times for each calibration verification/continuing calibration standard fall within the windows established during the initial calibration sequence?	[ ]	___	___
9.14 Do all standard retention times for each mid-concentration standard (analyzed after every 10 samples) fall within the <u>daily</u> RT windows	[ ]	___	___

ACTION: If the answer to either 9.13 or 9.14 above is no, check the chromatograms of all samples which followed the last in-control standard. All samples analyzed after the last in-control standard must be re-injected, if initial analysis indicated the presence of the specific analyte that exceeded the retention time criteria. If samples were not re-analyzed, document under Contract Non-compliance in the Data Assessment.

Reviewer has two options to determine how to qualify questionable sample data. First option is to determine if possible peaks are present within daily retention time window. If no possible peaks are found, non-detects are valid. If possible peaks are found (or interference), qualify positive hits as presumptively present "NJ" and non-detects are rejected "R". Second option is to use the ratio of the retention time of the analyte over the retention time of either surrogate. The passing criteria is $\pm$ 0.06 RRT units of the RRT of the standard component. Reject "R" all questionable analytes exceeding criteria, and "NJ" all other positive hits.

For any multi-response analytes, retention time windows should be used but analyst and reviewer should rely primarily on pattern recognition or use option 2 specified in paragraph above.

9.15 Are there any transcription/calculation errors

	YES	NO	N/A
between raw data and data summary forms?	___	[ ]	___

ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document the effect in data assessments under "Conclusions".

10.0 Analytical Sequence Check (Form VIII-PEST)

10.1 Have all samples been listed on CLP Form VIII or equivalent, and are separate forms present for each column?	[ ]	___	___

ACTION: If no, take action specified in 3.2 above.

10.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses?	[ ]	___	___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

10.3 Were the TCMX/DCB surrogate RTs for the samples within the mean surrogate RT from the initial calibration?	[ ]	___	___

Action: If no, see "Action" in section 9.14 above

11.0 Extraction Techniques for Sample Preparation

Method 8081B permits a variety of extraction techniques to be used for sample preparation. Which extraction procedure was used?

1. Aqueous samples:			
1. Separatory funnel (Method 3510)	[ ]	___	___
2. Continuous liquid-liquid extraction (Method 3520)	[ ]	___	___
3. Solid phase extraction (Method 3535)	[ ]	___	___
4. Other	[ ]	___	___
2. Solid samples:			
1. Soxhlet (Method 3540)	[ ]	___	___

	YES	NO	N/A
2. Automated Soxhlet (Method 3541)	[ ]	___	___
3. Pressurized fluid (Method 3545)	[ ]	___	___
4. Microwave extraction (Method 3546)	[ ]	___	___
5. Ultrasonic extraction (Method 3550)	[ ]	___	___
6. Supercritical fluid (Method 3562)	[ ]	___	___
7. Other	[ ]	___	___

11.1 Extract Cleanup - Efficiency Verification (Form IX)

11.1.1 Method 8082 (section 7.2) references method 3660 (sulfur) and 3665A (sulfuric acid) to use for Cleaning extracts. Were one or both method used? [ ] ___ ___

ACTION: If no, take action specified in 3.2 above. If data suggests cleanup was not performed, make note in the data assessment.

NOTE: Method 3620A, Florisil, may be used per approved project QA plan. The method does not list which analytes and surrogate(s) to use to verify column efficiency. The reviewer must check project plan to verify method used as well as the correct PCB list. If not stated or available, use the CLP listing or accept what the laboratory used.

11.2 Are all samples listed on modified CLP PCBs Florisil/Cartridge Check Form? [ ] ___ ___

ACTION: If no, take action specified in 3.2 above.

11.3 Was GPC Cleanup (method 3640A) performed? [ ] ___ ___

NOTE: GPC cleanup is not required and is optional. The reviewer should check Project Plan to verify requirement.

11.4 Were the same PCB analytes used in calibration used to check the efficiency of the cleanup procedures? [ ] ___ ___

11.5 Are percent recoveries (% R) of the PCBs and surrogate compounds used to check the efficiency of the cleanup procedures within lab's in-house QC limits (use 70-130% if not available) [ ] ___ ___

70-130% for GPC calibration? [ ] ___ ___

YES NO N/A

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for PCBs. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

12.0 PCB Identification

12.1 Has CLP Form X or equivalent, showing **retention time** data for positive results on the two GC columns, been completed for every sample in which a PCB was detected? [ ] ___ ___

ACTION: If no, take action specified in 3.2 above, or compile a list comparing the retention times for all sample hits on the two columns.

12.2 Are there any transcription/calculation errors between raw data and data summary forms (initial calibration summaries, calibration verification summaries, analytical sequence summaries, GPC and cleanup verification forms)? ___ [ ] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error in the data assessment.

12.3 Are retention times (RT) of sample compounds within the established RT windows for both columns/analyses? [ ] ___ ___

ACTION: Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify "R", unusable, all positive results not within RT windows unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

12.4 Check chromatograms for false negatives, especially if RT windows on each column were established differently.
Were there any false negatives? ___ [ ] ___

YES NO N/A

ACTION: Use professional judgement to decide if the compound should be reported. If there is reason to believe that peaks outside retention RT windows should be reported, make corrections to data summary forms (Form 1) and note in data assessment.

12.5 Was GC/MS confirmation provided when sample concentration was sufficient (> 10 ug/ml) in the final extract? [ ] ___ ___

ACTION: Indicate with red pencil which Form I results were confirmed by GC/MS and also note in data assessment.

12.6 Is the percent difference (%D) calculated for the positive sample results on the two GC columns <25.0%? [ ] ___ ___

NOTE: The method requires quantitation from one column. The second column is to confirm the presence of an analyte. It is the reviewer's responsibility to verify from the project plan what the lab was required to report. If the lab was required to report concentrations from both columns, continue with validation for % Difference. If required, but not reported, either contact the lab for results or calculate the concentrations from the calibration. If not required, skip this section. Document actions in Data Assessment.

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be qualified as follows:

% Difference	Qualifier
0-25%	none
26-70%	"J"
71-100%	"NJ"
>100% *	"R"
100-200% (Interference detected)**	"NJ"
>50% (PCBs value is <CRQL)	"U"

When the reported PCBs value is <CRQL and the %D is >50%, raise the value to the CRQL and qualify with "U" (non-detect).

* Check the chromatogram. If pattern is confirmed qualify "J". If pattern is mixed, has interference, or the PCB cannot be positively determined due to weathering, qualify "JN".

YES NO N/A

If PCB can not be confirmed, qualify the PCB as "R".

** When the reported %D is 100-200% but interference is detected in either column, qualify the data with "NJ".

13.0 Compound Quantitation and Reported Detection Limits

13.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? ___ |_| ___

NOTE: Single-peak PCBs results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interference is suspected, the lower of the two values should be reported and qualified according to section 12.6 above. This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has led to the quantitation of the second column confirmation results.

13.2 Are the EDLs (Estimated Detection Limits) adjusted to reflect sample dilutions and, for soils, % moisture? |_| ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest EDLs are used (unless a QC exceedance dictates the use of the higher EDL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

	YES	NO	N/A

ACTION: EDLs affected by large, off-scale peaks should be qualified as unusable, "R". If the interference is on-scale, the reviewer can provide a modified EDL flagged "UJ" for each affected compound.

14.0 Chromatogram Quality

14.1 Were baselines stable?	[ ]	___	___
14.2 Were any electropositive displacement (negative peaks) or unusual peaks seen?	___	[ ]	___

ACTION: Note all system performance problems in the data assessment.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for PCB analysis?	[ ]	___	___

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, the identity of the field duplicates is questionable. An attempt should be made to determine the proper identification of field duplicates.